

AP20 Rec'd PCT/PTO 13 JUL 2006

AMENDMENT

(Amendment by Provision of the Law Article 11)

To : Examiner of the Patent Office

(Seal)

PCT

November 18, 2005

Received

1. Identification of the International Application

P C T / J P 2005 / 000939

2. Applicant

Name: Japan Science and Technology Agency

Address: 4-1-8, Hon-cho, Kawaguchi-shi,
Saitama 332-0012 JAPAN

Country of nationality: JAPAN

Country of residence: JAPAN

3. AGENT

Name: HIRAYAMA, Kazuyuki

Patent Attorney (8287)

Address: 6th Floor, Shinjukugyoen Bldg.
2-3-10, Shinjuku, Shinjuku-ku,
Tokyo 160-0022 JAPAN

4. Object of Amendment Specification and Claims

5. Details of the Amendment

(1) In Specification page 3, lines 11 – 19 (English translation p.3 [0009] lines 18 – 31), “The above-mentioned object will be attained,and the drive member is fixed and held in the axis direction by magnetically fixed to the magnetic latch.” is amended to

-- The above-mentioned object will be attained, according to a first aspect of the present invention, by a driving mechanism using shape memory alloys comprising: a module wherein a first and a second shape memory alloy coils connected mutually in series in the axis direction, a drive member, and a fixing member are provided on one common substrate; a magnetic latch to hold the drive member; and a drive circuit to supply electricity to the first and the second shape memory alloy coils; said magnetic latch is made of a magnet plate and a plurality of magnetic bodies provided to said drive member; characterized in that said drive member is connected to the first and the second shape memory alloys coils and extending in the axis direction, the magnetic latch is made of a magnet plate and a plurality of magnetic bodies provided to the drive member, the first and the second shape memory alloy coils are selectively heated by electrical driving by the drive circuit, the drive member is moved in the axis direction by compressing or extending of the heated first or the second shape memory alloy coils, and the drive member is fixed and held in the axis direction by magnetically fixed to the magnetic latch. --

(2) In Specification, page 4, lines 3 – 5 (English translation p.4 [0011] lines 14 – 19), “The magnetic latch preferably includes a magnetic plate with a penetration hole through which a drive member penetrates without contact, and a plurality of magnetic bodies provided to the drive member, and said magnetic body is located apart mutually in the axis direction of the drive member, and the magnetic plate is magnetized in the axis direction of the drive member.” is amended to

-- The magnet plate of the magnetic latch is preferably provided with a penetration hole through which a drive member penetrates without contact, and said magnetic body is located apart mutually in the axis direction of the drive member, and the magnetic plate is magnetized in the axis direction of the drive member. –

(3) In Claims, page 32, Claim 1, lines 1 – 13 (English translation p.39, Claim 1, lines 1 – 17), “A driving mechanism using shape memory alloys fixed to said magnetic latch part.” is amended to

-- A driving mechanism using shape memory alloys comprising:

a module wherein a first and a second shape memory alloy coils

connected mutually in series in the axis direction, a drive member, and a fixing member are provided on one common substrate;

a magnetic latch to hold said drive member; and

a drive circuit to supply electricity to said first and the second shape memory alloy coils; said magnetic latch is made of a magnet plate and a plurality of magnetic bodies provided to said drive member; characterized in that said drive member is connected to the first and the second shape memory alloys coils and extending in the axis direction,

said magnetic latch is made of a magnet plate and a plurality of magnetic bodies provided to said drive member,

said first and the second shape memory alloy coils are selectively heated by electrical driving by said drive circuit,

said drive member is moved in the axis direction by compressing or extending of the heated first or the second shape memory alloy coils, and

said drive member is fixed and held in the axis direction by magnetically fixed to said magnetic latch. --

(4) In Claims, page 32, Claim 2, lines 1 – 5 (English translation p.39, Claim 2, lines 1 – 9), “The driving mechanism using shape memory alloys as set forth in claim 1 magnetized in the axis direction of said drive member.” is amended to

-- The driving mechanism using shape memory alloys as set forth in claim 1, characterized in that;

said magnet plate of said magnetic latch is provided with a penetration hole through which said drive member is penetrated without contact, and said magnetic bodies are arranged mutually separated in the axis direction of the drive member, and said magnet plate is magnetized in the axis direction of said drive member. --

(5) In Claims, pages 32 – 33 (English translation p.39 – 40), Claim 3 is deleted.

(6) In Claims, page 34, Claim 6 (English translation p.42, Claim 6), “any one of claims 1, 3, or 4” is amended to

-- Claim 1 or 4 --

6. List of Papers Attached:

- (1) Specification, substitute sheet pages 3, 3/1, and 4 (English translation substitute sheet pages 3, 3/1, and 4).
- (2) Claims, substitute sheet pages 32, 33, and 34 (English translation substitution sheet pages 39, 40, and 42).